Exhibit 1

Part 2 of 2

to log the access in order to update the user's profile (9:66-10:9). "For example, InfoBite 93 contains a news story with the title 'Global Warming Warning' and has associated resources 95. Associated resources 95 may include a full story text, a full story audio, a video clip, and an URL to a related story. In the preferred embodiment each of the resources in associated resources 95 is referenced by a fully qualified URL and thus, just the URLs may be stored in server resource database 55. The resources can be stored in server content database 51 (not shown in Fig. 4), or outside server A 17 in content provider E 6 (13:16-25). Tso further discloses the content retrieval unit coupled to a notification system, the notification system including a notification terminal controller coupled with an input/output controller and adapted to provide notifications to the cellular phone of content available from the content storage and retrieval unit: Items of information that are sent to InfoCast servers such as server A 17 from content providers are collectively termed "InfoCasts." An InfoCast can consist of either a data file containing one or more separate articles, or a video/audio feed. Thus, an InfoCast from content provider F 8 would consist of a multimedia feed containing one or more video segments along with any associated audio while an InfoCast from content provider A 5 consists of a text file containing one or more news stories. Although in the preferred embodiment, an InfoCast contains information from several content providers, in an alternate embodiment, an InfoCast can contain information from a single content provider (7:17-29). For each item contained in an InfoCast, InfoFeed interface 57 will create an 'InfoBite,' which can be sent to a user in lieu of the full item, as described below. Each InfoBite consists of a title, summary information for the associated item in

the InfoCast, such as keywords, category names or titles; and data necessary for a user to: (1) obtain a c6rresponding item of information from which an InfoBite is generated; (2) obtain a cross reference to an item of information; or, (3) perform certain 'InfoActions,' as described below...(7:30-39). After an InfoBite containing one or more resource identifiers is transmitted to a user, if the user wishes to retrieve an article or item identified by a resource identifier, a request is made by the client to the InfoCast server to send the fully qualified URL associated with the resource identifier to the client. The request is made by the client transmitting the resource identifier to the InfoCast server. The InfoCast server will either transmit the fully qualified URL associated with the resource identifier, or, bandwidth permitting, transmit the story or item to the client (8:48-57). Server A 17, which is termed an InfoCast server, is connected to a network B 21, which, in the preferred embodiment, is a cellular communication system. In addition, server A 17 is also connected to a content provider E 6, a content provider F 8, and a content provider G 10, as described below. Server A 17 is also connected to a client A 23 and a client B 25 through the use of network B 21. In addition, server A 17 is connected to a client C 29 and a client D 31 through a local area network 27. Similarly, server B 19, which is also an InfoCast server, is connected to a client E 35 and a client F 37 through a local area network 33 (2:64-3:7)) ***comprising: storing message content at the content storage and retrieval unit*** (In the preferred embodiment, content provider A 5 is a hyper-text transport protocol (HTTP) server that can provide a real-time news service to the various computer systems connected to network A 3 via hyper-text markup language (HTML) documents.

Content provider B 7 is a file transfer protocol (FTP) server which allows clients to access files located on the server. Content provider C 9 is another HTTP server maintained by a business and configured to be able to process electronic transactions. Content provider D 11 is an HTTP server configured to provide advertising information via HTML documents. Alternatively, content providers A 5, B 7, C 9 and D 11 can be servers offering other types of information using different protocols. For instance, content provider A 5, instead of being an HTTP server configured for delivering news, can be a server for providing wide area information services (WAIS). Other types of servers that can be located on network A 3 in addition to the servers mentioned above can include Gopher servers, Archie servers, and other servers providing other multimedia data. Moreover, servers providing WWW "searching" services--i.e., servers that search WWW sites and retrieve information matching certain criteria from those WWW sites--and USENET search engines--i.e., servers that search USENET news groups--can also interface with an InfoCast server to provide a constant stream of new information (3:8-33)***; the notification system transmitting a notification to the cellular phone of the content being available at the content storage and retrieval unit, wherein the notification includes an identification of the content storage and retrieval unit*** (After an InfoBite containing one or more resource identifiers is transmitted to a user, if the user wishes to retrieve an article or item identified by a resource identifier, a request is made by the client to the InfoCast server to send the fully qualified URL associated with the resource identifier to the client. The request is made by the client transmitting the resource identifier to the InfoCast server. The

InfoCast server will either transmit the fully qualified URL associated with the resource identifier, or, bandwidth permitting, transmit the story or item to the client. After receiving the fully qualified URL, the client can then initiate an InfoAction to retrieve the item identified by the fully qualified URL. In the preferred embodiment, large files and resources are not stored locally by InfoCast servers but are only accessible by using the fully qualified URL to retrieve the resource at the original storage location of the resource (8:48-64). As described above, each InfoBite also contains a set of resource identifiers. In the preferred embodiment, each resource identifier is a bit pattern generated by InfoFeed Interface 57 for each URL to be included in an InfoBite (8:1-4); ***receiving a request to perform an action on the notified content sent from the cellular phone at the content storage and retrieval unit, wherein neither the content storage and retrieval unit nor the notification system has transmitted the content to the cellular phone*** (After an InfoBite containing one or more resource identifiers is transmitted to a user, if the user wishes to retrieve an article or item identified by a resource identifier, a request is made by the client to the InfoCast server to send the fully qualified URL associated with the resource identifier to the client. The request is made by the client transmitting the resource identifier to the infoCast server. The Inf0Cast server will either transmit the fully qualified URL associated with the resource identifier, or, bandwidth permitting, transmit the story or item to the client (8:48-57). In the preferred embodiment, as described above, the InfoAction would contain data allowing a user to (1) retrieve one or more URLs referenced by the resource identifiers from schedule/resource controller 61; (2) send information; or (3)

execute scripts either locally on client A 23 or remotely on server A 17 (16:9-15). In Block 111, after the traffic information InfoBite has been displayed in Block 109, if the user performs an InfoAction, such as requesting greater detail of the traffic condition for a particular freeway, then operation in FIG. 5 will continue with block 113. Otherwise, if the user does not make a further request of information, then operations in FIG. 5 will end. A description of the operation of the retrieval process is contained below, in FIG. 8. In Block 113, InfoCast browser 89 receives the request of the user for the performing of an InfoAction, performs the InfoAction, and logs the request for notifying schedule/resource controller 61 of the user's request. Depending on the InfoAction to be performed, an InfoCast server or a content provider might be used to service the request (15:4-17). In Block 253, after the user of client A 23 decides to retrieve the "Full Story Audio" resource, client A 23 sends an InfoAction to request the download of the InfoCast resource referenced by the URL identified by resource number "FFFFFF" from server A 17 .... In an alternative embodiment, where the resource requested is contained in server content database 51 of server A 17, server A 17 can send the resource directly to client A 23 instead of sending the fully qualified URL (24:55-66). After receiving the fully qualified URL, the client can then initiate an InfoAction to retrieve the item identified by the fully qualified URL. In the preferred embodiment, large files and resources are not stored locally by InfoCast servers but are only accessible by using the fully qualified URL to retrieve the resource at the original storage location of the resource (8:58-64)***; the content storage and retrieval unit performing the action on the notified content*** (In Block 113, InfoCast browser 89

receives the request of the user for the performing of an InfoAction, performs the InfoAction, and logs the request for notifying schedule/resource controller 61 of the user's request. Depending on the InfoAction to be performed, an InfoCast server or a content provider might be used to service the request (15:4-17). In Block 253, after the user of client A 23 decides to retrieve the "Full Story Audio" resource, client A 23 sends an InfoAction to request the download of the InfoCast resource referenced by the URL identified by resource number "FFFFFF" from server A 17 .... In an alternative embodiment, where the resource requested is contained in server content database 51 of server A 17, server A 17 can send the resource directly to client A 23 instead of sending the fully qualified URL (24:55-66). In Block 255, server A 17 looks up the fully qualified URL identified by resource number "FFFFFF" in server resource database 55 and transmits the URL to client A 23. In an alternative embodiment, where the resource requested is contained in server content database 51 of server A 17, server A 17 can send the resource directly to client A 23 instead of sending the fully qualified URL. Thus, in the altemate embodiment, unless the resource is not contained in server content database 51 of server A 17, the resource retrieval process can be shortened. In Block 257, server A 17 will determine whether or not the resource requested by client A 23 is of a size small enough to be sent over the messaging bandwidth. If so, then operation in FIG. 8 will continue with Block 259. Otherwise, the operation in FIG. 8 will continue with Block 263. In Block 259, if it has been determined that the resource requested is small enough to send over the messaging bandwidth, server A 17 will initiate a transfer for the

"Full Story Audio" resource over the messaging bandwidth to client A 23 and client A 23 will store the resource in client content database 72 (24:60-25:24)).

In regards to claim 86 Tso teaches ***requested action is for the content storage and retrieval unit to forward the content, save the content, delete the content, reply to the content, or a combination thereof*** (After an InfoBite containing one or more resource identifiers is transmitted to a user, if the user wishes to retrieve an article or item identified by a resource identifier, a request is made by the client to the InfoCast server to send the fully qualified URL associated with the resource identifier to the client. The requestis made by the client transmitting the resource identifier to the InfoCast server. The InfoCast server will either transmit the fully qualified URL associated with the resource identifier, or, bandwidth permitting, transmit the story or item to the client (8:48-57). After receiving the fully qualified URL, the client can then initiate an InfoAction to retrieve the item identified by the fully qualified URL. In the preferred embodiment, large files and resources are not stored locally by InfoCast servers but are only accessible by using the fully qualified URL to retrieve the resource at the original storage location of the resource (8:58-65). In addition, InfoFeed interface 57 can also process electronic mail (e-mail) messages directed at a set of users in the territory served by server A 17 and create one or more InfoBites to be transmitted to the users. In cases where there are one or more attachments to the e-mail message, InfoFeed interface 57 would process those attachments in the manner described for files above. Thus, any attachments to the e-mail message would be stored in server content database 51 and each assigned a resource identifier to be stored in server

resource database 55. Similar to other resources, attachments would be stored in server A 17 until they are requested by client A23. InfoFeed interface 57 would allow content providers to create InfoBites by sending e-mail messages with attachments (10:27-40). Also, if the client resource database 71 does not contain the required resource to properly display the traffic information InfoBite, such as a map of the freeway system or a map of the surface street on which the user is located, then client A 23 may, if desired, either: (1) query schedule/resource controller 61 to retrieve that information in server content database 51 through the use of ODBC API 59 over network B 21 as via SMS messages, a direct data call, or a network connection; (2) query schedule/resource controller 61 to send the fully qualified URL associated with the resource identifier assigned to the map so that client A 23 can retrieve that map using back channel interface 21; or (3) not download the map and display a standard icon to inform the user that a map is available for downloading (14:21-34)).

In regards to claim 87, Tso teaches ***content storage and retrieval unit performs the one or more requested actions without having transmitted the notified content*** (For each item contained in an InfoCast, InfoFeed interface 57 will create an "InfoBite," which can be sent to a user in lieu of the full item, as described below. Each InfoBite consists of a title, summary information for the associated item in the InfoCast, such as keywords, category names or titles; and data necessary for a user to: (1) obtain a corresponding item of information from which an InfoBite is generated; (2) obtain a cross reference to an item of information; or, (3) perform certain "InfoActions," as described below. In addition to the methods described below, InfoBites

can also be generated by using a custom InfoBite editor (7:30-40). In Block 105, if there are any parts of the InfoCast traffic information that relate to the user, then operations in FIG. 5 will continue with Block 107. However, if there are no InfoBites that match the criteria of time of day and location of the user--i.e., no part of the InfoCast contains traffic reports for traffic within Los Angeles County--then operations in FIG. 5 will end (14:9-15)).

In regards to claim 88, Tso teaches ***content comprises audio data*** (For example, InfoBite 93 contains a news story with the title 'Global Warming Warning' and has associated resources 95. Associated resources 95 may include a full story text, a full story audio, a video clip, and an URL to a related story. In the preferred embodiment each of the resources in associated resources 95 is referenced by a fully qualified URL and thus, just the URLs may be stored in server resource database 55. The resources can be stored in server content database 51 (not shown in Fig. 4), or outside server A 17 in content provider E 6 (13:16-25)).

In regards to claim 89, Tso teaches ***content comprises image data*** (It is also to be noted that in cases where an item received by server A 17 is a non-text element such as a graphic, a sound sample or a video segment, InfoFeed interface 57 can create summary file of a smaller graphic that is a 'thumbnail' version of the graphic, a or limited portion of the audio sample, or a series of frames from the video segment, respectively (10:10-16)).

In regards to claim 90, Tso teaches ***content comprises video data*** (For example, InfoBite 93 contains a news story with the title 'Global Warming Warning' and

has associated resources 95. Associated resources 95 may include a full story text, a full story audio, a video clip, and an URL to a related story. In the preferred embodiment each of the resources in associated resources 95 is referenced by a fully qualified URL and thus, just the URLs may be stored in server resource database 55. The resources can be stored in server content database 51 (not shown in Fig. 4), or outside server A 17 in content provider E 6 (13:16-25)).

In regards to claim 91, Tso teaches ***cellular phone communicates by at least one of the following: a global system for mobile communications network (GSM), a cellular data packet data network (CDPD), a personal communications services network (PCS), or a short message service (SMS)*** ("FIG. 2 illustrates the preferred embodiment of network B 21, which represents a cellular telephone network such as that defined by the Global System for Mobile (GSM) communications standards. In network B 21, a short message service (SMS) center 41 is connected to a mobile switching center A 42 and a mobile switching center B 43. Mobile switching center A 42 and mobile switching center B 43 are connected to a base station controller A 44 and a base station controller B 45, respectively. Base station controller A 44 is interfaced to a base station transceiver A 46 and a base station transceiver B 47 while base station controller B 45 interfaces with a base station transceiver C 48. It is to be noted that each short message service center can serve one or more mobile switching centers, which in turn can support one or more base station controllers. Moreover, each base station controller is interfaced to one or more base station transceivers. The GSM system provides cell-level location information of all devices in the system and also allows the

sending of SMS broadcasts messages to all devices. The GSM elements in network B 21 and their functions are well known in the art and a description is provided herein for completeness only (3:49-4:3)).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 34, 35, 71-73 and 77-84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tso et al. (US PAT 6047327, hereinafter Tso).

In regards to claim 34, Tso teaches ***receiving further input from the user indicating that the wireless communication device should save the received notification message but not the information*** (Tso discloses receiving further input from the user indicating that the wireless communication device should save the received notification but not the message. Specifically, Tso discloses that notification messages are automatically saved and the only condition described for removal is when the InfoBite becomes out-of-date: Client InfoBite database 73 contains the InfoBite messages sent via SMS broadcast from server A 17 and from any other servers with which client A 23 has had contact. As will be described below, client InfoBite database 73 is constantly being updated as any InfoBite messages which are time sensitive and no longer useful--e.g., traffic information--are removed from client InfoBite database 73

on a regular basis as needed to conserve space (12:26-33). Tso further discloses that a user may opt to not save the message by not issuing a request to perform a retrieval InfoAction: After an InfoBite containing one or more resource identifiers is transmitted to a user, if the user wishes to retrieve an article or item identified by a resource identifier, a request is made by the client to the InfoCast server to send the fully qualified URL associated with the resource identifier to the client (8:48-53).

One of ordinary skill in the art would understand Tso to disclose that a notification message is saved, and that if the user does not issue a retrieval request, the message will not be retrieved or saved. Accordingly, a user of the Tso system receiving a notification on the client of the Tso system and performing any InfoAction other than a retrieve InfoAction will meet all limitations of claim 34, by performing an action on the message, saving the notification of the message, and not saving the message.

In regards to claim 35, Tso teaches ***receiving further input from the user indicating that the wireless communication device should save the received notification message but not the information*** (Tso discloses receiving further input from the user indicating that the wireless communication device should save the received notification but not the message. Specifically, Tso discloses that notification messages are automatically saved and the only condition described for removal is when the InfoBite becomes out-of-date: Client InfoBite database 73 contains the InfoBite messages sent via SMS broadcast from server A 17 and from any other servers with which client A 23 has had contact. As will be described below, client InfoBite database

73 is constantly being updated as any InfoBite messages which are time sensitive and no longer useful--e.g., traffic information--are removed from client InfoBite database 73 on a regular basis as needed to conserve space (12:26-33). Tso further discloses that a user may opt to not save the message by not issuing a request to perform a retrieval InfoAction: After an InfoBite containing one or more resource identifiers is transmitted to a user, if the user wishes to retrieve an article or item identified by a resource identifier, a request is made by the client to the InfoCast server to send the fully qualified URL associated with the resource identifier to the client (8:48-53).

One of ordinary skill in the art would understand Tso to disclose that a notification message is saved, and that if the user does not issue a retrieval request, the message will not be retrieved or saved. Accordingly, a user of the Tso system receiving a notification on the client of the Tso system and performing any InfoAction other than a retrieve InfoAction will meet all limitations of claim 34, by performing an action on the message, saving the notification of the message, and not saving the message.

In regards to claim 71, Tso teaches ***a method of notifying a cellular phone*** (figure 1 or 2, Client A or B, i.e. elements 23 or 25) ***of information available at a content storage and retrieval unit*** (figure 1, any one of Content Provider) ***utilizing at least two*** (FIG. 6 illustrates the operation of the preferred embodiment of the invention dealing with client configuration for situations where a user moves out of the territory served by one InfoCast server and into the territory served by another InfoCast server. The operation described below also applies to situations when a user powers up client

A 23 for the first time, whenever a client needs configuration information, or whenever a client receives a broadcast message over the SMS system containing domain information which does not correspond to what the client expects-- i.e. when the client receives a domain number different from the one where the client is purportedly currently located at. In describing FIG. 6, the example where a user moves out of the territory served by one InfoCast server and into the territory served by another InfoCast server will be used. Referring also to FIGS. 1 through 3, assume server A 17 is again the InfoCast server for California. Assuming that the territory from which the user has traveled is the state of Nevada, the InfoCast server serving the state of Nevada would transfer control to server A 17. Referring to FIG. 6, operation begins in Block 121, after the user, or client A 23, enters the territory served by server A 17. In Block 121, client A 23 will request configuration information by sending a request for configuration (RFC) message to the old, or last known, InfoCast server, which in this case is the Nevada InfoCast server (17:19-45)) ***notification systems*** (InfoCast Server A 17) ***each including a notification terminal coupled with an input/output controller*** (column 4, lines 43-53, In FIG. 3, server A 17 contains a server InfoBite database 50, a server content database 51, a subscriber database 53, and a server resource database 55 coupled to an open database connectivity (ODBC) application programming interface (API) 59. ODBC API 59 is also coupled to an InfoFeed interface 57 and a schedule/resource controller 61. Schedule/resource controller 61 is coupled to a billing service 63, a network A interface 65, and a messaging interface 67 for communicating with a client A 23 through the use of network B 21) ***comprising: receiving, at a first***

notification system, a data transmission from the content storage and retrieval unit (column 13, lines 9-15, In FIG. 4, content provider E 6 is a commercial service, such as CNN@Work.TM., which provides a real time news service to reporter 91. Reporter 91 is configured to receive the InfoCast information provided by content provider E 6 and store InfoBites and the resources related to each InfoBite in InfoBite database 50 and Server Resource database 55 of server A 17), ***the data transmission including a system identifier*** (i.e. resource identifier, s described above, each InfoBite also contains a set of resource identifiers (i.e. storage location). In the preferred embodiment, each resource identifier is a bit pattern generated by InfoFeed Interface 57 for each URL to be included in an InfoBite", 8:1-4) ***that is associated with the content storage and retrieval unit and an information identifier*** (i.e. interpreted as any one of Title, Topic, Summary) ***that is associated with information stored in the content storage and retrieval unit*** (column 13 lines 16-25, For example, InfoBite 93 contains a news story with the title "Global Warming Warning" and has associated resources 95. Associated resources 95 may include a full story text, a full story audio, a video clip, and an URL to a related story. In the preferred embodiment, each of the resources in associated resources 95 is referenced by a fully qualified URL and thus, just the URLs may be stored in server resource database 55. The resources can be stored in server content database 51 (not shown in FIG. 4) or stored outside server A 17 in content provider E 6); ***the receipt of the a first notification at the first notification system causing the first notification system to relay first notification to the cellular phone, the first notification identifying the information and its location*** (column 3

lines 56-67, column 7 lines 30-32, column 14, lines 16-21, In Block 107, Base station controller A 44 is interfaced to a base station transceiver A 46 and a base station transceiver B 47 while base station controller B 45 interfaces with a base station transceiver C 48. It is to be noted that each short message service center can serve one or more mobile switching centers, which in turn can support one or more base station controllers. Moreover, each base station controller is interfaced to one or more base station transceivers. The GSM system provides cell-level location information of all devices in the system and also allows the sending of SMS broadcasts messages to all devices. For each item contained in an InfoCast, InfoFeed interface 57 will create an "InfoBite," which can be sent to a user in lieu of the full item Assuming that there is at least one InfoBite that matches the time of day and location of user criteria, schedule/resource controller 61 will send that InfoBite to client A 23 through the use of messaging interface 67. This InfoBite message is sent as an SMS message over the GSM system of network B 21).

Tso in this embodiment does not explicitly teach ***causing a first notification system to relay a first notification as a second notification to a second notification system to be forwarded to it's final destination***.

Tso in another embodiment teaches FIG. 6 illustrates the operation of the preferred embodiment of the invention dealing with client configuration for situations where a user moves out of the territory served by one InfoCast server and into the territory served by another InfoCast server (17:19-24).

In Block 127, the old InfoCast server determines whether or not client A 23 is in the area served by old InfoCast server--i.e., whether client A 23 is in Nevada--or if client A 23 is in an area served by another InfoCast server. The determination of which InfoCast server is responsible for serving client A 23 is performed through the accessing of a file mapping the geographical area contained in each domain and the InfoCast server responsible for the domain. In the preferred embodiment, the mapping information is contained in a look-up table. If the client is not in the domain served by the old InfoCast server, then the operations in FIG. 6 will continue with Block 129 (18:36-47).

In Block 129, the old InfoCast server has determined that client A 23 is not in a domain served by the old InfoCast server but, instead, in a domain served by server A 17--i.e. somewhere in California. Thus, the old InfoCast server will forward the RFC received from client A 23 to server A 17 (18:50-55).

In Block 133, server A 17 requests the user profile from the home server of client A 23 as identified by the Home.sub.-- Domain field of the RFC message. Thus, if the user's home InfoCast server is in New York, then server A 17 would contact the New York InfoCast server through the use of network A interface 65. For example, the New York InfoCast server can be server B 19 (19:46-53).

It would be obvious to one of ordinary skill in the art to combine the embodiment of multiple InfoCast server configuration of Tso with the embodiment of ***causing a first notification system to relay a first notification as a second notification to a***

second notification system to be forwarded to it's final destination of Tso in order to route notification messages to the appropriate recipient.

In regards to claim 72, Tso teaches ***communication between notification systems is over at least an SS7 network*** (Tso discloses communication between notification systems is over at least an SS7 network. Specifically, Tso discloses that InfoCast servers will communicate with each other: In Block 129, the old InfoCast server has determined that client A 23 is not in a domain served by the old InfoCast server but, instead, in a domain served by server A 17--i.e. somewhere in California. Thus, the old InfoCast server will forward the RFC received from client A 23 to server A 17 (18:35-49).

One of ordinary skill in the art would recognize that InfoCast servers are connected to cellular phone networks, e.g. Network B21 (see, e.g., Fig. 2) or over the Internet, e.g. Network A 3 (see, e.g., Fig. 3, 2:54-63). Communication between InfoCast servers over Network B21 could therefore be implemented using available telephonic communication techniques including SS7 signalling).

In regards to claim 73, Tso teaches ***communication between notification systems is over at least the Internet*** (Tso discloses communication between notification systems is over at least an internet network. Specifically, Tso discloses that InfoCast servers will communicate with each other: In Block 129, the old InfoCast server has determined that client A 23 is not in a domain served by the old InfoCast server but, instead, in a domain served by server A 17--i.e. somewhere in California. Thus, the old

InfoCast server will forward the RFC received from client A 23 to server A 17 (18:35-49).

One of ordinary skill in the art would recognize that InfoCast servers are connected to cellular phone networks, e.g. Network B 21 (see, e.g., Fig. 2) or over the Internet, e.g. Network A 3 (see, e.g., Fig. 3, 2:54-63). Communication between InfoCast servers over Network A 3 would therefore be over the Internet).

In regards to claim 77, Tso teaches ***each notification system has an interface with a MSC*** (Tso further discloses that the first notification system (e.g., InfoCast server) accesses the home location registry (e.g., location database in the mobile switching center of a cellular infrastructure) to retrieve information associated with the cellular phone (e.g., location information for the wireless device): In network B 21, mobile switching center A 42 and mobile switching center B 43 control the establishment of calls between different cellular devices, the roaming of portable cellular devices, and the handing-off of devices between different base stations. For roaming purposes, mobile switching center A 42 and mobile switching center B 43 also track the real-time physical location of each cellular device, and a user of each cellular device (4:4-14). Presently, roaming in cellular networks is implemented by devices (or terminals) periodically beaconing their ID's--i.e., phone numbers--to the nearest base station. Base stations also periodically broadcast cell ID and other control information to all terminals within range. Thus, each cellular device is always aware of its respective location, and the cellular network always knows the location of each terminal as long as that terminal is operating within range of a base station .... There are two databases to

which InfoCast servers must have access: one that maps cell ID's to physical locations, and one that maps physical locations to domains. The databases may be distributed or replicated across all InfoCast servers, or be part of the cellular infrastructure (16:24-43). In Block 123, after the old InfoCast server receives the RFC from client A 23, the old InfoCast server requests the current physical location of client A 23 from the MSC serving the area in which client A 23 is located. In this case, as seen in FIG. 2, client A 23 is located in the area served by MSC A 42 and, thus, in Block 125, MSC A 42 returns the physical location of client A 23 (18:28-34)) but does not explicitly teach ***notification system having an interface with a home location registry***.

Lu in the same or similar field of endeavor teaches in a PBX (interpreted as a ***notification system***) having an interface (see figure 2B below) with a home location registry.

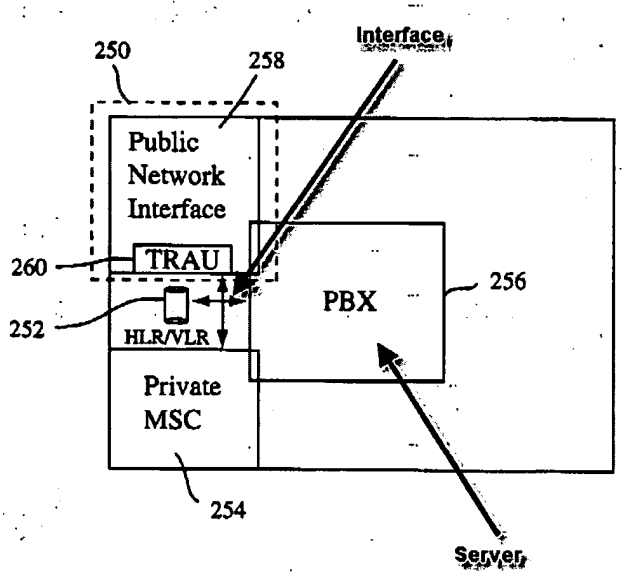

Fig. 2B

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Tso's system/method of ***notification system keeping track of the clients,*** with Lu's suggested teaching of ***using an interface with a home location registry for such tracking***. The motivation is that (as suggested by Lu, column7, lines 1-10) Registry serves, among others, to keep track of MS units that are authorized to use the resources of the cellular network, the subscriber data such as names, unique identification information such as is kept in Subscriber Identification Module (SIM) for GSM handsets, telephone numbers associated with the MS units, and the like. Subscriber information is kept track of because cellular network must keep track of the MS units controlled by it as well as the subscribers on its network. Further motivation is that known work (i.e. ***notification system having an interface with a home location registry***) in one field of endeavor (i.e. Lu prior art) may prompt variations of it for use in either the same field or a different one (i.e. Tso prior art) based on design incentives (i.e. Registry serves, among others, to keep track of MS units that are authorized to use the resources of the cellular network, the subscriber data such as names, unique identification information such as is kept in Subscriber Identification Module (SIM) for GSM handsets, telephone numbers associated with the MS units, and the like. Subscriber information is kept track of because cellular network must keep track of the MS units controlled by it as well as the subscribers on its network) or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

In regards to claim 78, Tso teaches each ***notification system accesses MSC to retrieve information associated with the cellular phone*** (In network B 21, mobile switching center A 42 and mobile switching center B 43 control the establishment of calls between different cellular devices, the roaming of portable cellular devices, and the handing-off of devices between different base stations. For roaming purposes, mobile switching center A 42 and mobile switching center B 43 also track the real-time physical location of each cellular device, and a user of each cellular device (4:4-14). Presently, roaming in cellular networks is implemented by devices (or terminals) periodically beaconing their ID's--i.e., phone numbers--to the nearest base station. Base stations also periodically broadcast cell ID and other control information to all terminals within range. Thus, each cellular device is always aware of its respective location, and the cellular network always knows the location of each terminal as long as that terminal is operating within range of a base station .... There are two databases to which InfoCast servers must have access: one that maps cell ID's to physical locations, and one that maps physical locations to domains. The databases may be distributed or replicated across all InfoCast servers, or be part of the cellular infrastructure (16:24-43). In Block 123, after the old InfoCast server receives the RFC from client A 23, the old InfoCast server requests the current physical location of client A 23 from the MSC serving the area in which client A 23 is located. In this case, as seen in FIG. 2, client A 23 is located in the area served by MSC A 42 and, thus, in Block 125, MSC A 42 returns the physical location of client A 23 (18:28-34)) but does not teach using ***Home Location Registry for location tracking***.

Lu in the same or similar field of endeavor teaches using home location registry for location tracking:

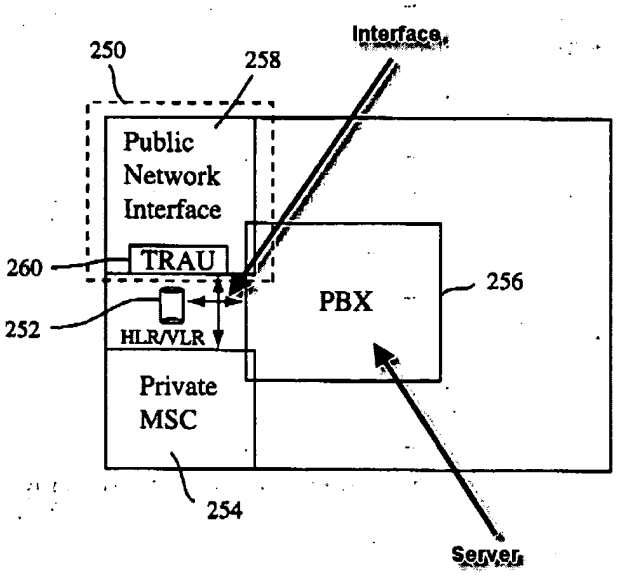

Fig. 2B

FIG. 2B shows in a symbolic format cPBX subsystem 206 of FIG. 2A. Within cPBX subsystem 206, shown are a Gateway MSC (GMSC) block 250, a registry 252 which contains both the home location registry (HLR) and the visitor location registry-(VLR registry), a private MSC block 254 and a cPBX block 256 (6:31-36). See also, at 6:62 - 7:10; 10:46-52; 11:6-12, discloses that the HLR tracks the physical location of mobile stations.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate in Tso's system/method of ***server keeping track of the clients,*** with Lu's suggested teaching of ***using a home location registry for such tracking***. The motivation is that (as suggested by Lu, column7, lines 1-10) Registry

serves, among others, to keep track of MS units that are authorized to use the resources of the cellular network, the subscriber data such as names, unique identification information such as is kept in Subscriber Identification Module (SIM) for GSM handsets, telephone numbers associated with the MS units, and the like. Subscriber information is kept track of because cellular network must keep track of the MS units controlled by it as well as the subscribers on its network. Further motivation is that known work (i.e. ***server keeping track of the clients with a home location registry***) in one field of endeavor (i.e. Lu prior art) may prompt variations of it for use in either the same field or a different one (i.e. Tso prior art) based on design incentives (i.e. Registry serves, among others, to keep track of MS units that are authorized to use the resources of the cellular network, the subscriber data such as names, unique identification information such as is kept in Subscriber Identification Module (SIM) for GSM handsets, telephone numbers associated with the MS units, and the like. Subscriber information is kept track of because cellular network must keep track of the MS units controlled by it as well as the subscribers on its network) or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

In regards to claim 79, Tso teaches ***information retrieved comprises the wireless network location of the cellular phone*** (In Block 123, after the old InfoCast server receives the RFC from client A 23, the old InfoCast server requests the current physical location of client A 23 from the MSC serving the area in which client A 23 is located. In this case, as seen in FIG. 2, client A 23 is located in the area served by MSC

A 42 and, thus, in Block 125, MSC A 42 returns the physical location of client A 23 (18:28-34)).

In regards to claim 80, Tso teaches ***first and second notifications contain the same data regarding the information and its location*** (Tso in another embodiment teaches FIG. 6 illustrates the operation of the preferred embodiment of the invention dealing with client configuration for situations where a user moves out of the territory served by one InfoCast server and into the territory served by another InfoCast server (17:19-24). In Block 127, the old InfoCast server determines whether or not client A 23 is in the area served by old InfoCast server--i.e., whether client A 23 is in Nevada--or if client A 23 is in an area served by another InfoCast server. The determination of which InfoCast server is responsible for serving client A 23 is performed through the accessing of a file mapping the geographical area contained in each domain and the InfoCast server responsible for the domain. In the preferred embodiment, the mapping information is contained in a look-up table. If the client is not in the domain served by the old InfoCast server, then the operations in FIG. 6 will continue with Block 129 (18:36-47). In Block 129, the old InfoCast server has determined that client A 23 is not in a domain served by the old InfoCast server but, instead, in a domain served by server A 17--i.e. somewhere in California. Thus, the old InfoCast server will forward the RFC received from client A 23 to server A 17 (18:50-55). In Block 133, server A 17 requests the user profile from the home server of client A 23 as identified by the Home.sub.--Domain field of the RFC message. Thus, if the user's home InfoCast server is in New York, then server A 17 would contact the New York InfoCast server through the use of

network A interface 65. For example, the New York InfoCast server can be server B 19 (19:46-53)).

In regards to claim 81, Tso teaches ***second notification system receives a request from the cellular phone to perform an action on the information and relays the request to the content storage and retrieval unit*** (Tso discloses receives a request from the cellular phone to perform an action on the information and relays the request to the content storage and retrieval unit. In particular, Tso discloses that a user can transmit a request to carry out an action on the information by choosing one of the "InfoActions" included in an "InfoBite" that is transmitted to the user (e.g.. 16:1-18). The action may include requesting and retrieving the data specified by a URL or resource identifier included in the InfoBite (e.g., 16:11-18). More specifically, Tso discloses performing a variety of "InfoActions," depending on user input, on an "InfoBite." As described in Table 1, above, there are different types of InfoActions, identified by the Action_Type field. These InfoActions allow the user to perform actions, such as access the internet, initiate voice calls, and process scripts, on the client. When the InfoAction is executed by the browser, the Action_Type field is used to determine the way in which the information in the Data field is interpreted. For instance, an Action_Type code of "0OH" tells the browser that the Data field of the action contains a URL and a WWW browser should be executed using the URL as a parameter. Alternatively, Action_Type code of "03H" tells InfoCast browser 89 that the Data field of the action contains actual HTML text. In the latter case, InfoCast browser 89 may save the text as a file and a WWW browser would be run using the name of the locally saved HTML file as a

parameter. In this way, the HTML file can be viewed. Table 2, below, describes the contents of various InfoAction Data fields and suggested codes which could be used (8:65-9:14). After an InfoBite containing one or more resource identifiers is transmitted to a user, if the user wishes to retrieve an article or item identified by a resource identifier, a request is made by the client to the InfoCast server to send the fully qualified URL associated with the resource identifier to the client. The request is made by the client transmitting the resource identifier to the InfoCast server. The InfoCast server will either transmit the fully qualified URL associated with the resource identifier, or, bandwidth permitting, transmit the story or item to the client (8:48-57). After receiving the fully qualified URL, the client can then initiate an InfoAction to retrieve the item identified by the fully qualified URL. In the preferred embodiment, large files and resources are not stored locally by InfoCast servers but are only accessible by using the fully qualified URL to retrieve the resource at the original storage location of the resource (8:58-64). For example, in the case above where InfoBites containing advertisements from vegetarian eating establishments are sent to the user who is vegetarian, the InfoBites can contain InfoActions for the user to retrieve menus, nutritional information for each item in the menus and addresses of the restaurants, in addition to InfoActions which allow the user to make reservations at the restaurants. In the preferred embodiment, as described above, the InfoAction would contain data allowing a user to: (1) retrieve one or more URLs referenced by the resource identifiers from schedule/resource controller 61; (2) send information; or (3) execute scripts either locally on client A 23 or remotely on server A 17. Thus, client A 23 can retrieve an

HTML document containing menu information, or, an HTML document containing a form with which reservation information can be submitted, either normally or securely (16:3-18)).

In regards to claim 82, Tso teaches ***request is not relayed through the first notification system*** (Tso further discloses that the request is not relayed through the first notification system. Specifically, Tso discloses that requests are transmitted to the InfoCast server that is responsible for a particular client. Requests are not transmitted to other InfoCast servers for processing: In Block 135, as server A 17 is now the InfoCast server serving client A 23, server A 17 will be responsible for processing future requests from client A 23 and sending future InfoBites to client A 23. Server A 17 will also become responsible for updating the user's home InfoCast server with any changes in the user's profile record contained in subscriber database 53. For example, server A 17 would update client resource database 71 and client content database 72 of client A 23, as requested, by using schedule/resource controller 61 to retrieve information from server resource database 55 through the use of ODBC API 59, and transferring that information over network B 21 using messaging interface 67 of server A 17 and messaging interface 79 of client A 23. InfoCast client 77 would then update client resource database 71 through the use of ODBC API 75. Thus, for example, by request of client A 23, schedule/resource controller 61 would transfer the state map of California and a regional map of the territory in which the user is currently located to InfoCast client 77 such that InfoCast client 77 can update client resource database 71 by

removing the now unnecessary map of Nevada and loading the maps pertaining to the state of California in client resource database 71 (19:53-20:8)).

In regards to claim 83, Tso teaches ***content storage and retrieval unit retrieves the information and transmits the information to the cellular phone*** (Tso discloses that the content storage and retrieval unit (e.g., Server A 17; Content Providers 6, 8, 10) retrieves the information (e.g., an article) associated with the information identifier(e.g., a URL) and transmits the information to the cellular phone (e.g., Client A 23, Client B 25). For example, Tso discloses: After an InfoBite containing one or more resource identifiers is transmitted to a user, if the user wishes to retrieve an article or item identified by a resource identifier, a request is made by the client to the InfoCast server to send the fully qualified URL associated with the resource identifier to the client. The request is made by the client transmitting the resource identifier to the InfoCast server. The InfoCast server will either transmit the fully qualified URL associated with the resource identifier, or, bandwidth permitting, transmit the story or item to the client (8:48-57). In addition, Tso discloses that the information is retrieved from the content provider (e.g., Server A 17; Content Providers 6, 8, 10) by using a cellular data call using well-understood prior art protocols such as FTP or HTTP file transfer: Back channel interface 81 in the preferred embodiment is a cellular data call. Thus when application 83 in the above example needs to access content provider A 5 to perform an FTP file transfer, application A 83 will use back channel 81 to dial into an internet service provider using a protocol such as the point to point protocol (PPP) or

the serial line internet protocol (SLIP), providing client A 23 with access to the internet, and then perform the FTP file transfer over the internet (12:55-64)).

In regards to claim 84, Tso teaches ***information transmission does not go through the first notification system*** (Tso further discloses that the information transmission bypasses the first system. The information of claim 23 is transmitted in response to a request from the wireless communication device. Tso discloses that information requested from a URL by a wireless communication device is transmitted through a back channel interface without having the information transmitted through the InfoCast server: [W]here an InfoBite that announces the availability of a demonstration program at an FTP site such as content provider B 7 contains a resource identifier to allow the user to initiate an FTP transfer by invoking an InfoAction[,]... after retrieval of the fully qualified URL associated with the resource identifier either locally or from client A 17, InfoCast browser 89 calls application A 83 through the use of InfoAction API 87 to communicate with content provider B 7 through the use of back-channel interface 81. If InfoCast browser 89 is capable of acting as an FTP client, InfoCast browser 89 can use back channel interface 81 to perform the FFP file transfer over network B 21 by contacting an internet service provider (5:25-37). Back channel interface 81 in the preferred embodiment is a cellular data call. Thus, when application A 83 in the above example needs to access content provider A 5 to perform an FTP file transfer, application A 83 will use back channel interface 81 to dial into an internet service provider using a protocol such as the point to point protocol (PPP) or the serial line internet protocol (SLIP), providing client A 23 with access to the internet,

and then perform the FTP file transfer over the internet. Alternatively, back channel interface 81 can be networking hardware to allow access by application A 83, application B 85 and InfoCast browser 89 to a TCP/IP network in the case where client A 23 is located on a local area network implementing TCP/IP. For example, the back channel interface in client C 29 would be networking hardware to allow client C 29 to communicate over local area network 27 (12:55-13:3).

9. Claim 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tso et al. (US PAT 6047327, hereinafter Tso) in view of Lu et al. (US PAT 5818824, hereinafter Lu) and *Always On, Always Connected/Mobile Computing article* (The Always On article was published on September 29, 1996, hereinafter "Always On",).

In regards to claim 14, Tso teaches ***mobile radiotelephone network includes at least a cellular packet data system*** (column 3 lines 49-54, FIG. 2 illustrates the preferred embodiment of network B 21, which represents a cellular telephone network such as that defined by the Global System for Mobile (GSM) communications standards. In network B 21, a short message service (SMS) center 41 is connected to a mobile switching center A 42 and a mobile switching center B 43) but does not explicitly teach ***CDPD***.

The *Always On* article discloses that: "The Wireless NDIS Extensions found in the Microsoft NDIS 4.0 [footnote omitted] standard, proposed by the PCCA added many features for controlling wireless specific device attributes. These extensions are in kernel mode, primarily intended to be used by Winsock2 protocol stacks rather than

user mode applications. They are designed for packet radio devices such as CDPD or Ardis. The Unimodem Extensions we proposed adds features required by cellular modems, and are at user level, allowing application programs or control panel applets to easily manipulate wireless devices." *Always On* article, pg. 923, Column 2.

A person of ordinary skill in the art would readily combine the respective disclosures of the Tso patent and the *Always On* article to allow a radiotelephone network as disclosed in the Tso patent to include at least cellular digital packet data system. This would be readily apparent to a person of ordinary skill in the art, particularly since each of the Tso patent and the *Always On* article pertain, at least in part, to using an inexpensive wireless medium as the notification channel to implement data pushing. Moreover, in the present case, it is believed that Michael Man-Hak Tso identified as the first inventor of the Tso patent is the same as Michael M. Tso, identified as the first author of the Always On article. In fact, it is believed that the named inventors of the Tso patent (Michael Man-Hak Tso; David Alfred Romrell; Daniel Joshua Gillespie) are the same individuals listed as the authors of the Always On article (Michael M. Tso; Daniel J. Gillespie; David A. Romrell). Further, both the Tso patent and the Always On article discuss the InfoCast system and InfoBites (see, e.g., Tso patent, 2:64 - 3:7, 4:54 - 6:4; *Always On* article at pg. 922).

In particular, one of ordinary skill (such as Michael Tso) would look to the ***Always On*** article and understand that CDPD (Cellular Digital Packet Data) is a cellular digital packet data system that could be utilized with a radiotelephone network. A person of ordinary skill in the art would also be motivated to utilize the CDPD network with the

system and method as disclosed in the Tso patent because the Tso patent discloses that it can be utilized with various networks and network protocols. See, e.g., Tso patent, 17:15-17.

In regards to claim 17, Tso teaches ***mobile radiotelephone network*** but does not explicitly teach ***including at least a personal communications services (PCS) system.***

Tso discloses a GSM communication system as one embodiment of a mobile radiotelephone network (e.g., Network B 21), and is not limited to only this standard. One of ordinary skill in the art would recognize from this disclosure that Tso could have been readily adapted for use with other communication systems and/or standards such as PCS system. The motivation is that as suggested by Tso: For other wireless networks, such as packet radio networks and paging networks, the methods discussed above can be used to perform location functions (17:15-17). While the present invention has been particularly described with reference to the various figures, it should be understood that the figures are for illustration only and should not be taken as limiting the scope of the invention. Many changes and modifications may be made to the invention, by one having ordinary skill in the art, without departing from the spirit and scope of the invention (29:49-55).

The *Always On* article discloses that: "It is our thesis that in addition to broadband media, a widely deployed, inexpensive wireless medium is required as the notification channel to implement data pushing economically. This medium need not be synchronous, nor high bandwidth, but it is desirable to be reliable (i.e., at least include

acknowledgement) and provide some store and forward capabilities. We believe a class of narrowband messaging solutions (e.g., Short Messaging Service (SMS) in digital cellular networks, and US NB-PCS) meets these requirements." *Always On* article, pg. 920, Column 1.

A person of ordinary skill in the art would readily combine the respective disclosures of the Tso patent and the Always On article to allow a radiotelephone network as disclosed in the Tso patent to include at least a personal communications services (PCS) system. This would be readily apparent to a person of ordinary skill in the art, particularly since each of the Tso patent and the Always On article pertain, at least in part, to using an inexpensive wireless medium as the notification channel to implement data pushing. Moreover, in the present case, it is believed that Michael Man-Hak Tso identified as the first inventor of the Tso patent is the same as Michael M. Tso, identified as the first author of the Always On article, particularly since both the Tso patent and the Always On article discuss the InfoCast system and InfoBites (see, e.g., Tso patent, 2:64 - 3:7, 4:54 - 6:4; *Always On* article at pg. 922). In fact, it is believed that the named inventors of the Tso patent (Michael Man-Hak Tso; David Alfred Romrell; Daniel Joshua Gillespie) are the same individuals listed as the authors of the Always On article (Michael M. Tso; Daniel J. Gillespie; David A. Romrell).

In particular, one of ordinary skill (such as Michael Tso) would know that the Tso patent discloses the use of the GSM network's short message service (SMS) to broadcast at a cell level. In addition to carrying InfoBites, SMS broadcasts as disclosed in the Tso patent.can also carry information to update a client resource database, a

client content database, and the client configuration of client A 23. Id. A person of ordinary skill in the art would also be motivated to utilize the PCS as disclosed in Tso for the same or substantially same reasons, as the Always On article identifies both SMS and PCS as narrowband messaging solutions to implement data pushing economically, which is one of the features of the Tso patent. See, e.g., Tso patent, 1:58-62.

10. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tso et al. (US PAT 6047327, hereinafter Tso) in view of Lu et al. (US PAT 5818824, hereinafter Lu) and Internet Engineering Task Force (IETF) Request for Comment 1911: Voice Profile For Internet Mail (February, 1996) (hereinafter RFC 1911)).

In regards to claim 54, Tso teaches transmission of e-mail content from a content provider to the InfoCast server: (In addition, InfoFeed interface 57 can also process electronic mail (e-mail) messages directed at a set of users in the territory served by server A 17 and create one or more InfoBites to be transmitted to the users. In cases where there are one or more attachments to the e-mail message, InfoFeed interface 57 would process those attachments in the manner described for files above. Thus, any attachments to the e-mail message would be stored in server content database 51 and each assigned a resource identifier to be stored in server resource database 55. Similar to other resources, attachments would be stored in server A 17 until they are requested by client A 23. InfoFeed Interface 57 would allow content providers to create InfoBites by sending e-mail messages with attachments (10:27-40).

Tso does not explicitly teach a transmission is formatted at least in part according to the voice profile for internet mail.

The voice profile for Internet mail standard was defined as an experimental standard for conveying voice mail or fax information between computer systems at least as early as February 1996. See Internet Engineering Task Force (IETF) Request for Comment 1911: Voice Profile For Internet Mail (February, 1996) (RFC 1911). RFC 1911 discloses transmission of audio content between server using e-mail architecture:

"This document specifies a profile of the TCP/IP multimedia messaging protocols for use by special-purpose voice processing platforms. These platforms have historically been special-purpose computers and often do not have facilities normally associated with a traditional Internet Email-capable computer. This profile is intended to specify the minimum common set of features and functionally for conformant systems." RFC 1911 at 1-2.

"This specification is intended for use on a TCP/IP network, however, it is possible to use the SMTP protocol suite over other transport protocols. The necessary protocol parameters for such use is outside the scope of this document." RFC 1911 at 3.

"ESMTP is a general-purpose messaging protocol, designed both to send mail and to allow terminal console messaging. Simple Mail Transport Protocol (SMTP) was originally created for the exchange of US-ASCII 7-bit text messages. Binary and 8-bit text messages have traditionally been transported by encoding the messages into a 7-bit text-like form." RFC 1911 at 11.

One of ordinary skill in the art would further understand that the communication of e-mail content from a content provider to the InfoCast server, which is disclosed in Tso, could also transport the VMIP content described in RFC 1911.

A person of ordinary skill in the art would readily combine the respective disclosures of the Tso patent and RFC 1911. The Tso patent discloses a system where multiple InfoCast servers transmitting notifications of audio recording, including summary information, interoperate. RFC 1911 discloses a protocol used for handling the interoperation of systems handling recorded audio messaging. This would be readily apparent to a person of ordinary skill in the art, particularly since each of the Tso patent and RFC 1911 pertain to interfaces between server components operating in a network where audio messages are being sent from and to various end users.

For at least these reasons, combining the respective features of the Tso patent and RFC 1911 is at most the mere application of known techniques to a known device ready for improvement to yield predictable results, rendering claim 54 unpatentable. See, Examination Guidelines, Rationale "D." Additionally, RFC 1911 is a standardized solution used to address the intercommunication of servers handling voice data, and as such it would be "obvious to try" the Voice Profile for Internet Mail of RFC 1911 as one of a finite number of solutions to interconnect the multiple InfoCast servers of the Tso patent. See, Examination Guidelines, Rationale "E." In addition, the claimed invention is a combination of known prior art elements that maintain their respective properties or functions after they have been combined. See, Examination Guidelines

Update, Example 4.3. *Sundance, Inc. v. DeMonte Fabricating Ltd., 550 F.3d 1356 (Fed. Cir 2008)*. Therefore, the combination of the Tso patent and RFC 1911 renders claim 54 obvious.

11. Claim 58 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tso et al. (US PAT 6047327, hereinafter Tso) in view of Lu et al. (US PAT 5818824, hereinafter Lu) and Internet Engineering Task Force (IETF) Request for Comment 1911: Voice Profile For Internet Mail (February, 1996) (hereinafter RFC 1911)).

In regards to claim 58, Tso teaches an InfoCast server have access to database: Presently, roaming in cellular networks is implemented by devices (or terminals) periodically beaconing their ID's--i.e., phone numbers--to the nearest base station. Base stations also periodically broadcast cell ID and other control information to all terminals within range. Thus, each cellular device is always aware of its respective location, and the cellular network always knows the location of each terminal as long as that terminal is operating within range of a base station. When a cellular device client detects that the current cell ID has changed, it may send a request for configuration message, as described below, to its last known InfoCast server, or the appropriate InfoCast server responsible for the new territory, if known. The InfoCast server then translates the cell ID to a physical location--e.g., longitude/latitude--as well a domain location. There are two databases to which InfoCast servers must have access: one that maps cell ID's to physical locations, and one that maps physical locations to domains. The databases

may be distributed or replicated across all InfoCast servers, or be part of the cellular infrastructure (16:24-43).

Tso does not explicitly teach address is determined from a lightweight directory access protocol.

The Lightweight Directory Access Protocol (LDAP) is an Internet Engineering Task Force standard defined at least as early as July 1993. See IETF RFC 1487:X.500 Lightweight Directory Access Protocol (July 1993).

LDAP provides a simple way of accessing an organized data set on a server using a client:

"The protocol described in this document is designed to provide access to the Directory while not incurring the resource requirements of the Directory Access Protocol (DAP). This protocol is specifically targeted at simple management applications and browser applications that provide simple read/write interactive access to the Directory, and is intended to be a complement to the DAP itself." RFC 1911 at 1.

One of ordinary skill in the art would understand the disclosure of Tso to include the disclosure of a lookup system to determine the location or identity of a subscriber. One of ordinary skill in the art would further understand this lookup could be performed using the LDAP described in RFC 1487.

A person of ordinary skill in the art would readily combine the respective disclosures of the Tso patent and RFC 1487. The Tso patent discloses a system where an InfoCast server looks up location information for a specific subscriber in a location database. RFC 1487 discloses a protocol used for simple accessing and recording of

directory information, such as the location for a specific recipient identification. This would be readily apparent to a person of ordinary skill in the art, particularly since each of the Tso patent and RFC 1487 pertain to accessing lookup information for specific entities in a network.

For at least these reasons, combining the respective features of the Tso patent and RFC 1487 is at most the mere application of known techniques to a known device ready for improvement to yield predictable results, rendering claim 58 unpatentable. See, *Examination Guidelines*, Rationale "D." Additionally, RFC 1487 is a standardized solution used to locate information on a specific entity from a server, and as such it would be "obvious to try" LDAP as described in RFC 1487 as one of a finite number of solutions to provide an interface to the location registry of the '327 patent. See, *Examination Guidelines*, Rationale "E." In addition, the claimed invention is a combination of known prior art elements that maintain their respective properties or functions after they have been combined. See, *Examination Guidelines* Update, Example 4.3. *Sundance, Inc. v. DeMonte Fabricating Ltd., 550 F.3d 1356 (Fed. Cir 2008)*. Therefore, the combination of the Tso patent and RFC 1487 renders claim 58 obvious.

12. Claim 31 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tso et al. (US PAT 6047327, hereinafter Tso) in view of Metroka et al. (US PAT 5117449, hereinafter Metroka).

In regards to claim 31, Tso teaches client device receiving audio:

In Block 259, if it has been determined that the resource requested is small enough to send over the messaging bandwidth, server A 17 will initiate a transfer for the "Full Story Audio" resource over the messaging bandwidth to client A 23 and client A 23 will store the resource in client content database 72.

In Block 261, after client A 23 has retrieved the "Full Story Audio" resource, InfoCast browser 89 is used to play the audio information. If the resource received is in a data format that InfoCast browser 89 cannot handle, client A 23 can call other applications, such as application A 83, to process the data (24:43-25:19).

Tso does not explicitly teach receiving audible alert.

Metroka in the same or similar field of endeavor teaches both paging and cellular radiotelephone functions can be combined in a small, lightweight, single device by sharing most circuitry. The apparatus can receive paging signals simultaneously with radiotelephone signals because of dual receivers (105 and 110). When the paged party receives a page, an alert tone, a vibration, a visual indication, or a voice message is used to alert the party Information, Abstract.

One of ordinary skill in the art would understand the disclosure of Tso to include the disclosure of an audible alert to notify the user of a pending item to be handled; thus making the system user-friendly.

In regards to claim 33, Tso teaches client device receiving audio:

In Block 259, if it has been determined that the resource requested is small enough to send over the messaging bandwidth, server A 17 will initiate a transfer for the

"Full Story Audio" resource over the messaging bandwidth to client A 23 and client A 23 will store the resource in client content database 72.

In Block 261, after client A 23 has retrieved the "Full Story Audio" resource, InfoCast browser 89 is used to play the audio information. If the resource received is in a data format that InfoCast browser 89 cannot handle, client A 23 can call other applications, such as application A 83, to process the data (24:43-25:19).

Tso does not explicitly teach receiving vibration alert.

Metroka in the same or similar field of endeavor teaches both paging and cellular radiotelephone functions can be combined in a small, lightweight, single device by sharing most circuitry. The apparatus can receive paging signals simultaneously with radiotelephone signals because of dual receivers (105 and 110). When the paged party receives a page, an alert tone, a vibration, a visual indication, or a voice message is used to alert the party Information, Abstract.

One of ordinary skill in the art would understand the disclosure of Tso to include the disclosure of an vibration alert to notify the user of a pending item to be handled; thus making the system user-friendly.

In reagards to claims 31 and 33, a person of ordinary skill in the art would readily combine the respective disclosures of the Tso patent and the Metroka patent to include in the system disclosed in the Tso patent alternative alerts such as audible alerts or a vibration alert as disclosed in the Metroka patent. This would be readily apparent to a person of ordinary skill in the art, particularly since each of the Tso patent and the '616 patent pertain to cellular mobile devices in GSM systems, and the mobile cellular

radiotelephone disclosed in the Metroka patent is operable in the GSM system disclosed by the Tso patent, allowing the mobile radiotelephone of the Metroka patent to be readily combined with the GSM system of the Tso patent.

For at least these reasons, combining the respective features of the Tso patent and the Metroka patent is at most the mere application of known techniques to a known device ready for improvement to yield predictable results, rendering claims 31 and 33 unpatentable. See, *Examination Guidelines*, Rationale "D." In addition, the claimed invention is a combination of known prior art elements that maintain their respective properties or functions after they have been combined. See, *Examination Guidelines* Update, Example 4.3. *Sundance, Inc. v. DeMonte Fabricating Ltd., 550 F.3d 1356 (Fed. Cir 2008)*. Therefore, the combination of the Tso patent and the Metroka patent renders claims 31 and 33 obvious.

13. Claims 67 and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tso et al. (US PAT 6047327, hereinafter Tso) in view of Lu et al. (US PAT 5818824, hereinafter Lu) and Sattar et al. (US PAT 5255305).

In regards to claim 67, Tso teaches all the limitations of claim 38 above but does not explicitly teach notification system, the content storage and retrieval unit, or both include voice recognition capabilities.

Sattar in the same or similar field of endeavor teaches the general-purpose computer 40 preferably provides an interface, shown graphically at 50, which is adapted to convert commands from the user that are input through the telecommunications lines

30 into a recognizable "query" to the telecommunications system. The interface 50 allows recognition of the user commands which have been digitized, so that the particular software routines which run the voice processing transactions can be recognized by the telecommunications system (9:33-42).

A person of ordinary skill in the art would readily combine the respective disclosures of the Tso patent and the Sattar patent to include in the system disclosed in the Tso patent the additional option of selecting InfoActions to perform using voice commands as disclosed in the Sattar patent. This would be readily apparent to a person of ordinary skill in the art, particularly since each of the Tso patent and the Sattar patent pertain to providing data retrieval servers for devices in cellular networks.

For at least these reasons, combining the respective features of the Tso patent and the Sattar patent is at most the mere application of known techniques to a known device ready for improvement to yield predictable results, rendering claims 67 and 68 unpatentable. See, *Examination Guidelines*, Rationale "D." In addition, the claimed invention is a combination of known prior art elements that maintain their respective properties or functions after they have been combined. See, *Examination Guidelines* Update, Example 4.3. *Sundance, Inc, v. DeMonte Fabricating Ltd., 550 F.3d 1356 (Fed. Cir 2008)*. Therefore, the combination of the Tso patent and the Sattar patent renders claim 67 obvious.

In regards to claim 68, Tso teaches all the limitations of claims 38 and 67 above but does not explicitly teach responding to a recognized voice instruction.

Sattar in the same or similar field of endeavor teaches the general-purpose computer 40 preferably provides an interface, shown graphically at 50, which is adapted to convert commands from the user that are input through the telecommunications lines 30 into a recognizable "query" to the telecommunications system. The interface 50 allows recognition of the user commands which have been digitized, so that the particular software routines which run the voice processing transactions can be recognized by the telecommunications system (9:33-42).

A person of ordinary skill in the art would readily combine the respective disclosures of the Tso patent and the Sattar patent to include in the system disclosed in the Tso patent the additional option of selecting InfoActions to perform using voice commands as disclosed in the Sattar patent. This would be readily apparent to a person of ordinary skill in the art, particularly since each of the Tso patent and the Sattar patent pertain to providing data retrieval servers for devices in cellular networks.

For at least these reasons, combining the respective features of the Tso patent and the Sattar patent is at most the mere application of known techniques to a known device ready for improvement to yield predictable results, rendering claims 67 and 68 unpatentable. See, *Examination Guidelines*, Rationale "D." In addition, the claimed invention is a combination of known prior art elements that maintain their respective properties or functions after they have been combined. See, *Examination Guidelines* Update, Example 4.3. *Sundance, Inc, v. DeMonte Fabricating Ltd., 550 F.3d 1356 (Fed. Cir 2008)*. Therefore, the combination of the Tso patent and the Sattar patent renders claim 68 obvious.

14. Claim 64 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tso et al. (US PAT 6047327, hereinafter Tso) in view of Lu et al. (US PAT 5818824, hereinafter Lu) and Buhrmann et al. (US PAT 5903845, hereinafter Buhrmann).

In regards to claim 64, Tso teaches that the information changes after the notification is sent but before the content storage and retrieval unit receives a request sent by thecellular phone in response to a received notification:

In Block 131, server A 17 will issue a client configuration message with a list of updated resources to client A 23. What resources are contained in the list of updated resources is determined by server A 17 by identifying the last time client A 23 was in a domain served by server A 17 from the Last--Time--In--Domain field of the RFC message, and then appending any resources updated after that time to the list of updated resources. Client A 23 has the option at this point of retrieving any of the resources as desired (18:54-65).

Schedule/resource controller 61 also checks server content database 51 and server resource database 55 to remove outdated resources--i.e., resources with time stamps that are expired--and to process InfoBites that have "awakened"--i.e., process InfoBites that were set at a previous time to be activated at a later preset time (11:7-12).

[C]lient InfoBite database 73 is constantly being updated as any InfoBite messages which are time sensitive and no longer useful--e.g., traffic information--are removed from client InfoBite database 73 on a regular basis as needed to conserve space (12:29-33).

Tso does not explicitly teach in response to subsequently receiving a request from the cellular phone, the content storage and retrieval unit acts upon the changed information according to the request received from the cellular phone and not the originally notified information.

Buhrmann discloses that in response to subsequently receiving a request from the cellular phone, the content storage and retrieval unit acts upon the changed information according to the request received from the cellular phone and not the originally notified information.

More particularly, Buhrmann discloses a network node in a mobile subscriber network that stores information relating to individual subscribers:

"A subscriber enters personal information data into a PIM. Such personal information data comprises schedule data describing timed events (e.g. meeting times, appointments, etc.) and contact data describing user contacts (e.g., name, address, phone number, etc.). Based on the personal information data, the PIM generates profile update data which is transmitted to a telecommunications network node at which subscriber profile data is stored."(3:46-53).

Buhrmann further discloses that subscriber information may be updated:

"As described above, profile update data may be generated based on schedule data 128 stored in PIM 122. Additionally, profile update data may be generated based on contact data 129 as follows. As described above, contact data 129 contains data such as name, address, and telephone number for user contacts. In order to view such contact data 129, the user is presented, through user interface 136, with a display 100

(FIG. 11) which lists all, or part, of the contact data 129. As shown in FIG. 11, the display 1100 contains names with associated addresses and telephone numbers. A subscriber could use.such a PIM display to request an update to the subscriber's profile. For example, assume the subscriber is entering a meeting but is waiting for an important call from Mary Jones. Thus, the subscriber wants all calls to be forwarded to voice mail, except for a call from Mary Jones' phone number, which is to be delivered to the subscriber's mobile station 110. The subscriber would select (e.g. by Using a mouse) entry 1102 in display 1100. The subscriber would then indicate a call completion request (e.g., selective call acceptance) for the selected entry 1102, and the subscriber would also indicate the start and end time that the call completion request is to be active. Such an indication may be made, for example, through a PIM command using a pull down menu. Of course, there are many variations on how the subscriber may select a name from the display 1100 and enter a call completion request, depending on the particular PIM implementation. Upon confirmation of the request, the PIM 122, under control of the PIM program 130 and the subscriber profile update API 132, generates profile update data, containing call completion update data, and sends the profile update data to the wireless cellular communication network 102. The steps of generating the profile update data and sending the profile update data to the wireless cellular communication network 102 are similar to steps 308 and 310 described above in conjunction with FIG. 3. In this example, upon receipt of the profile update data, the subscriber profile record in database 118 would be updated to contain a feature entry containing subscriber call completion data specifying that selective call acceptance for

phone number (465) 493-5835 be invoked during a particular time, and that calls from other phone numbers are to be directed to voice mail. Such a feature entry would be similar to feature entry 606 of record 600 described above in conjunction with FIG. 6. Thus, in accordance with this aspect of the invention, contact data 129 which is stored as personal information data 127 in memory 126 of the PIM 122 is used to allow a user to request that call completion feature updates be made to the user's subscriber profile in the wireless cellular communication network 102." (9:63-10:44).

Buhrmann further discloses that upon a request from the cellular phone (e.g., an attempt to dial a subscriber whose information is stored in the subscriber database) the mobile switching center will access the updated subscriber profile in the network node:

"Call processing in accordance with the updated subscriber profile will now be described in conjunction with the flowchart of FIG. 7. In step 702 a call is placed from landline telephone 116 to mobile station 110. In step.704, the call is routed through the PSTN 114 to the MSC 104. It is noted that the routing of calls from a landline telephone to a wireless cellular communications network is well known in the art. In step 706 the MSC 104 sends a query to database 118 via link 144 requesting the subscriber profile record of the subscriber associated with mobile station 110. The SCP logic 120 is configured to receive the request, retrieve the subscriber profile record 600 from the database 118, and send the subscriber profile record 600 containing the subscriber profile data to the MSC 104. As described above, the subscriber profile record 600

includes both subscriber call completion data (entries 604, 606, 610) and subscriber alert data (entry 608)." (10:45-61).

"As an example, consider a call placed from telephone 116 (having a telephone number of (123) 888-8888) to mobile station 110 at 12:30 PM on Mar. 1, 1996. Upon receipt of the call the MSC 104 will request the subscriber profile record associated with mobile station 110 from database 118. Upon receipt of subscriber profile record 600, the MSC 104 will determine that FEATURE-2 606 is active. In accordance with FEATURE - 2, only calls from telephone number (123) 555-6666 will be accepted between 12:00 Noon and 1:00 PM. All other calls will be routed to the subscriber's voice mail. The telephone number of the calling telephone 106, called the ANI, is provided to the MSC 104 by the PSTN 114 during routing of the call in a manner which is well known in the art. Thus, the MSC 104 determines that the ANI is not to be accepted by the mobile station 110 at this time, and the call is routed to a voice mail processor 146, where the caller from telephone 116 can leave a message for the subscriber. Alternatively, if the telephone number of telephone 116 was (123) 555-6666, then the call would be routed to mobile station 110." (11:4-23)

A person of Ordinary skill in the art would readily combine the respective disclosures of the Tso patent and the Buhrmann patent to include in the system disclosed in the Tso patent the handling of updates to entries in the notification system as disclosed in the Buhrmann patent. This would be readily apparent to a person of ordinary skill in the art, particularly since each of the Tso patent and the Buhrmann patent both pertain to the handling of subscriber data in cellular networks. Both the Tso

patent and the Buhrmann patent disclose standard configurations of mobile networks, e.g. Tso patent, 2:54-4:33; Buhrmann patent, 5:13-6:4. Both the Tso patent and the Buhrmann patent disclose modes of operating sub scriber location features in mobile networks, e.g., Tso patent, 4:33 -53, 16:24 -20:53; Buhrmann patent 1:20-2:43, 9:63-10:44. Both the Tso patent and the Buhrmann patent store subscriber profiles indicating information about how and where subscriber information should be delivered.

For at least these reasons, combining the respective features of the Tso patent and the Buhrmann patent is at most the mere application of known techniques to a known device ready for improvement to yield predictable results, rendering claim 64 unpatentable. See, *Examination Guidelines*, Rationale "D." In addition, the claimed invention is a combination of known prior art elements that maintain their respective properties or functions after they have been combined. See, *Examination Guidelines* Update, Example 4.3. *Sundance, Inc. v. DeMonte Fabricating Ltd., 550 F.3d 1356 (Fed. Cir 2008)*. Therefore, the combination of the Tso patent and the Buhrmann patent renders claim 64 obvious.

15. Claim 65 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tso et al. (US PAT 6047327, hereinafter Tso) in view of Lu et al. (US PAT 5818824, hereinafter Lu) and Nikas et al. (US PAT 5463382, hereinafter Nikas).

In regards to claim 65, Tso teaches all the limitations of claim 38 above but does not explicitly teach receives information from the cellular phone regarding the amount of available memory in the cellular phone.

Nikas discloses the notification system receives information from the cellular phone regarding the amount of available memory in the cellular phone.

More particularly, Nikas discloses an acknowledge-back (e.g. two-way) pager in a mobile network that generates information regarding the available memory in the pager and transmits that information to the paging system. Nikas discloses that a paging notification system transmits the amount of memory required for an available page for the receiver. The pager determines whether memory is sufficient to receive the page. If so, the pager sends a request message that indicates memory is sufficient. If not, the pager sends a delay message that indicates memory is not sufficient:

"Briefly, in operation, the message source 104 preferably inputs a message and an intended selective call receiver identifier (ID) into the acknowledge-back selective call communication system 100. The message and ID, for example, could be the telephone number of the message source and the address of the intended selective call receiver 120, entered as dual-tone multifrequency signals (DTMF) from a push-button telephone dial. The controller 110 stores the message and ID in a memory therein, and, in accordance with the preferred embodiment of the present invention, sends the ID and a message length value for the pending message to the message transmitters 106.

The message transmitter.s 106 transmit the ID and the message length value over the outbound radio link 114. The selective call receiver 120 that matches the ID decodes the message length value and transmits the ID and a response, utilizing the acknowledge transmitter 124. The response preferably is either a request to send or a

request to delay, based upon a comparison of the message length value with the available memory space in the selective call receiver 120. The acknowledge receiver 108 receives the ID and the response and sends them to the controller 110 over the communication link 112. The controller 110 then controls further processing of the pending message for the selective call receiver 120 matching the ID in accordance with the response received therefrom." (3:38-63).

"The determination element 330 [of the selective call receiver 120] includes a comparator element for comparing the memory space available with the length of the pending message to determine whether sufficient memory space is available to store the pending message. The determination element 330 also includes a first responder element 334 for making the response a request to send the pending message, in response to sufficient memory space being available. The determination element 330 further includes a second responder element 336 for making the response a request to delay the pending message, in response to insufficient memory space being available." (8:11-21).

"FIG. 4 is a protocol diagram 400 depicting transactions transmitted between the infrastructure 102 and the selective call receiver 120 in accordance with the preferred embodiment of the present invention. The transactions depicted in the protocol diagram 400 are those which occur wherein the selective call receiver 120 determines that sufficient receiver memory space is available therein for receiving a pending message .... The message length transaction 406 comprises an identifier (ID) 407 for identifying the selective call receiver 120 for which a pending message has been

received by the infrastructure 102. The ID 407 preferably is followed by a message length value 408 for specifying to the selective call receiver 120 the length of the pending message, the length having been computed by the controller 110 in a conventional manner. Optionally, the message length transaction 406 can comprise at least one message packet 410 including a portion of the pending message. ff sufficient memory space is available in the selective call receiver 120 to store a message of the length specified, the selective call receiver 120 responds to the message length transaction 406 by sending the request to send transaction 412, comprising an ID 409 for identifying the responding selective call receiver 120, and a request to send command 414. As discussed earlier herein, the ID 409 is preferably the same as the ID 407. In alternative systems, however, the ID 409 may differ from the ID 407, or be omitted, depending on design choice." (8:34-9:5).

"FIG. 5 is a protocol diagram 500 depicting transactions transmitted between the infrastructure 102 and the selective call receiver 120 in accordance with the preferred embodiment of the present invention. The transactions depicted in the protocol diagram 500 are an example of those which can. occur wherein the selective call receiver 120 determines that insufficient memory space is available therein for receiving the pending message. The first transaction is the message length transaction 406 described previously for the protocol diagram 400. Having determined, however, that there is insufficient memory space, the selective call receiver 120 responds to the message length transaction 406 with a request to delay transaction 504. The request to delay transaction 504 comprises the ID 409, followed by a request to delay command 502.

After a predetermined delay, the controller 120 retransmits the message length transaction 406, which can be, for example, again responded to with another request to delay transaction 504." (9:21-39).

A person of ordinary skill in the art would readily combine the respective disclosures of the Tso patent and the Nikas patent to include in the system disclosed in the Tso patent the messaging protocol of the Tso patent to prevent the transmission of data larger than the available memory of the client of the Nikas patent. This would be readily apparent to a person of ordinary skill in the art, particularly since each of the Tso patent and the Nikas patent both pertain to preserving limited memory on mobile devices by transmitting first a limited notification followed by a request for the message itself.

For at least these reasons, combining the respective features of the Tso patent and the Nikas patent is at most the mere application of known techniques to a known device ready for improvement to yield predictable results, rendering claim 65 unpatentable. See, *Examination Guidelines*, Rationale "D." In addition, the claimed invention is a combination of known prior art elements that maintain their respective properties or functions after they have been combined. See, *Examination Guidelines* Update, Example 4.3. *Sundance, Inc. v. DeMonte Fabricating Ltd., 550 F.3d 1356 (Fed. Cir 2008)*. Therefore, the combination of the Tso patent and the Nikas patent renders claim 65 obvious.

16. Claim 66 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tso et al. (US PAT 6047327, hereinafter Tso) in view of Lu et al. (US PAT 5818824, hereinafter Lu) and Nguyen et al. (US PAT 6070067, hereinafter Nguyen).

In regards to claim 66, Tso teaches all the limitations of claim 38 above and also teaches that billing management is provided by a service within the InfoCast system:

"In the preferred embodiment, schedule/resource controller 61 is also responsible for maintaining billing information for each user and sending it to billing service 63. It is to be noted that the maintaining of billing information can optionally be shifted to billing service 63." (10:62-66)

Tso does not explicitly teach a prepayment billing system as a node in a wireless communications network and the notification system informs the cellular phone user via Ihe cellular phone that the user's message account has insufficient funds.

Nguyen discloses a prepayment billing system as a node in a wireless communications network:

"FIG. 1 shows an exemplary wireless network attached to a prepayment system operating in accordance with an embodiment of the present invention. The network is depicted in simplified form by showing only a single base station and an associated cell. The network comprises an mobile subscriber represented by MT 10 which is in wireless communication with BS 12. The MT 10 may be operating within a service area 11 that may be a home service area for the subscriber or a visiting service area when roaming for example. The BS 12 is typically coupled to MSC 14 by a digital pulse code modulation (PCM) link capable of efficiently delivering digital data over vast distances.

Also coupled to MSC 14 is a prepayment node 16 (PPN) to provide prepayment functionality to the network. The PPN 16 is linked to a home location register 18 (HLR) which contains relevant information and profiles of subscribers to the network. The PPN 16 utilizes information from the HLR 18 in order to calculate the appropriate billing data for the subscriber." (2:60-3:30).

Nguyen discloses a system that includes messaging facilities such as SMS:

"The exemplary embodiment depicts a wireless network operating in accordance with the enhanced Digital Advanced Mobile Phone System (D\-AMPS) as specified in TIA IS-136, Rev A. Those skilled in the art are appreciative of the fact that the IS-136 Rev A standard supports enhanced functions associated with teleservice transport mechanisms such as Over-the-Air-Teleservice (OATS) functions such as short message service (SMS). Another important type of OATS function is Over-the-Air-Activation (OAA) which supports the procedures necessary to activate new subscribers service over the air without the need to manually program each MT. Typically this is accomplished by the subscriber initially entering a feature code and pressing SEND. The feature code entry results in the establishment of a voice call to the service provider's customer service center 20 (CSC) which in turn exchanges the necessary information with the MT and initiates the procedures needed to establish an account such as billing information, credit worthiness, and to set up service options. This process is also referred to as Subscriber Activation and results in a new subscriber record being created in the HLR via the CSC-HLR interface." (3:12-32).

Nguyen discloses the notification system informs the cellular phone user via the cellular phone that the user's message account has insufficient funds:

"In step 29, the credit balance is verified for sufficient funds prior to making a call in order to proceed. For example, the balance must be in excess of that required for at least 2 minutes of talk time or any minimum time period set by the service provider, If the credit balance is insufficient the subscriber is notified via a voice message (step 31), for example, and the call is terminated (step 33)." (4:12-18).

A person of ordinary skill in the art would readily combine the respective disclosures of the Tso patent and the Nguyen patent to include in the system disclosed in the Tso patent the billing protocol disclosed in the Nguyen patent, including notification of insufficiency of user funds. This would be readily apparent to a person of ordinary skill in the art, particularly since each of the Tso patent and the Nguyen patent both pertain to the handling of subscriber data in cellular networks, e.g. Tso patent, 4:33-53, 16:24-20:53; Nguyen patent at 2:59-69, and both address the handling of billing for users of those systems, Tso patent, 10:62-66; Nguyen patent, 4:12-18.

For at least these reasons, combining the respective features of the '327 patent and the Nguyen patent is at most the mere application of known techniques to a known device ready for improvement to yield predictable results, rendering claim 66 unpatentable. See, *Examination Guidelines*, Rationale "D." In addition, the claimed invention is a combination of known prior art elements that maintain their respective properties or functions after they have been combined. See, *Examination Guidelines* Update, Example 4.3. *Sundance, Inc. v. DeMonte Fabricating Ltd., 550 F.3d 1356 (Fed.*

Cir 2008). Therefore, the combination of the Tso patent and the Nguyen patent renders claim 66 obvious.

Conclusion

17. The patent owner is reminded of the continuing responsibility under 37 CFR 1.565(a) to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving Patent No. 7280838 throughout the course of this reexamination proceeding. The third party requester is also reminded of the ability to similarly apprise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

18. Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.550(a)). Extension of time in *ex parte* reexamination proceedings are provided for in 37 CFR 1.550(c).

19. All correspondence relating to this *ex parte* reexamination proceeding should be directed:

By EFS: registered users may submit via the electronic filing system EFS-Web, at https://sportal.uspto.gov/authenticate/authenticateuserlocalepf.html.

By Mail to: Mail Stop *Ex Parte* Reexam
Central Reexamination Unit
Commissioner for Patents
P.O. Box 1450

Alexandria, Virginia 22313-1450

By FAX to: (571) 273-9900
Central Reexamination Unit

By hand: Customer Service Window
Attn: Central Reexamination Unit
Randolph Building, Lobby Level
401 Dulany Street
Alexandria, VA 22314

For EFS-Web transmissions, 37 CFR 1.8(a)(1)(i) (C) and (ii) states that correspondence (except for a request for reexamination and a corrected or replacement request for reexamination) will be considered timely filed if (a) it is transmitted via the Office's electronic filing system in accordance with 37 CFR 1.6(a)(4), and (b) includes a certificate of transmission for each piece of correspondence stating the data of transmission, which is prior to the expiration of the set period of time in the Office action.

Any inquiry by the patent owner concerning this communication or earlier communications from the Legal Advisor or Examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

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